

REMARKS

The Office examined claims 1-6 and rejected same. With this paper, claim 1 is canceled, claims 2-4 are amended, and none are added. The application now includes 5 claims.

Claim Rejections under 35 USC §102

In the Office Action, the following rejections are made against the claims in the application:

1. Claims 1 and 3-4 are rejected under 35 USC §102(b) as being anticipated by Ylitalo *et al* (U.S. Patent Application Publication 2003/0021961).

With this paper, claim 1 is canceled and claims 3-4 are amended to depend from claim 2.

2. Claim 6 is rejected under 35 USC §102(b) as being anticipated by Shimoda *et al* (U.S. Patent No. 6,126,281).

Claim 6 recites an ink jet printing apparatus equipped with a linear ink head. The linear ink head has a transparent ink head, an ultraviolet (UV) ray exposing means and UV ray curable ink heads of various colors in a straight line. In the specification, it is disclosed that the UV ray exposing means is a light source that is capable of emitting UV rays. One example of the UV exposing means is described on page 16, line 25 to page 17 line 2 of the originally filed specification as a metal halide lamp.

Shimoda discloses a head 1s for coating a surface modifier on a surface modification area, a heater 7 as means for drying the surface modifier coated on the surface modification area, and heads 1c, 1m and 1y for printing various colors. The heater 7 is a drying mechanism and is constituted to generate heat when a heating signal is output from a control circuit (col. 5, lines 60-62). According to the disclosure of Shimoda, the heater 7 is not capable of emitting UV rays, and the heater is not arranged so as to be linear with the ink heads.

Therefore, claim 6 is different from Shimoda.

3. Claim 6 is rejected under 35 USC §102(b) as being anticipated by Caiger *et al* (U.S. Patent No. 6,145,979).

Caiger discloses an apparatus comprising a plurality of print heads for printing different color inks. Each print head is equipped with an UV drying means for pre-curing. A separate UV ray exposing means is arranged at a distance downstream from the print heads (col. 3, line 61 to col. 4, line 29 and Fig. 5). Compared to claim 6, Caiger does not disclose a transparent ink head for printing transparent ink and an ultraviolet (UV) ray exposing means that is arranged linearly with the transparent ink head and the color ink heads. Although the UV ray exposing means is disclosed, it is separate from the print heads and it is not for drying the transparent ink. Thus the invention disclosed in Caiger does not contain all the elements of claim 6 and the arrangement thereof.

4. Claims 5 and 6 are rejected under 35 USC §102(b) as being anticipated by Lin (U.S. Patent No. 5,764,263).

Claim 5 recites an ink jet printing apparatus equipped with a two-stage ink head. The two-stage ink head has a front had and a rear head. The front head has an UV ray exposing means and a transparent ink head, and the rear head has an UV ray exposing means and UV ray curable ink heads of various colors.

The Examiner asserts that the heaters shown in Fig. 2 of Lin (elements 25, 30) correspond to the UV ray exposing means in claims 5 and 6. Applicant respectfully disagrees. Lin discloses that the elements 25 and 30 in Fig. 2 are "optional microwave heaters" (col. 11, lines 40-41). It is known that microwave (wavelength $10^{-3} \sim 10^{-1}$ m) and UV ray (wavelength $10^{-8} \sim 4 \times 10^{-7}$ m) are different kinds of electromagnetic radiation. Elements 25 and 30 are designed for emitting microwave radiation. Therefore, they are not capable of emitting UV rays. Moreover, none of the microwave heaters 25 and 30 is arranged to be part of a print head. Therefore, claims 5 and 6 are different from Lin.

In view of the foregoing, claims 5 and 6 are different from any of the cited references. Therefore, they are believed to be patentable. Applicant respectfully requests the rejections of claims 5 and 6 be reconsidered and withdrawn.

5. Claim 2 is rejected under 35 USC §102(b) as being anticipated by Blanco (U.S. Patent Application Publication No. 2004/0153204).

Claim 2 recites a process for ink jet printing on cloth using UV ray curable ink. The process comprises the steps of (1) forming a three-dimensional pattern by repeating the step of applying a transparent UV ray curable ink and then curing by UV rays; and (2) applying an UV ray curable ink containing a coloring component to form a three-dimensional image.

Compared to the above process, Blanco does not disclose the step of applying transparent UV ray curable ink and then curing the ink by the UV rays. In Blanco, in advance of applying the colored ink, a liquid comprising glycerin, water and a drying retarder is applied. This liquid does not have the UV ray curable property as the UV curable resin disclosed in the present application. The curing method as shown in Figs. 3-5 of Blanco, which is cited by the Examiner in rejecting claim 2, is "heat curing" by heating the canvas to 250°C. This is different from the curing method of claim 2, i.e. by the UV rays.

Based on the foregoing, claim 2 is believed to be patentable in view of Blanco. Applicant respectfully requests the rejections of claim 2 under 35 USC 102(b) be reconsidered and withdrawn.

Claims 3 and 4 are now amended to depend from claim 2. Since claim 2 is believed to be patentable, claims 3 and 4 are also believed to be patentable. Applicant respectfully requests the rejections of claims 3 and 4 under 35 USC 102(b) also be reconsidered and withdrawn.

Conclusion

For all the foregoing reasons, it is believed that all the remaining claims of the instant application are patentable, and their passage to issue is earnestly solicited. Applicant's agent urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

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Respectfully submitted,

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